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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590  
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06/19/2002

EXAMINER

BALASUBRAMANIAN, VENKATARAMAN

ART UNIT	PAPER NUMBER
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1624

DATE MAILED: 06/19/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/779,604

Applicant(s)

GUPTA ET AL.

Examiner

Venkataraman  
Balasubramanian

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.      6) ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

Claims 1-19 are now pending.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Following reasons apply.

1. Recitation of the term "including" in claims 5 and 16 renders these claims indefinite. The transitional term "including" which is synonymous with "comprising," or "containing", "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. "Including" is a term of art used in the claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim "comprising" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts". See MPEP 2111.03.
2. Claim 5 also recites the same solvent more than once, for example heptane, carbon disulfide. It is not clear what is intended.
3. Recitation of "benzene rings substituted with at least one halide" in claim 5 is indefinite as it is not clear what benzene rings are being referred to in plural. Also it is not clear what is the difference between the benzene halides and the halobenzenes recited in the first three lines of this claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritzsche et al. US 1,551,095.

Fritzsche et al. teaches several tris aryl substituted triazines from cyanuric halide with  $\alpha$ -naphthol and other aromatics in presence of condensing agents such as aluminum chloride or sulfuric acid in presence or absence of solvents. See formula shown on col. 1 and the definition of A and B. Note the definition of permits the process for making instant compound of formula III. Also note on line 33-38, Fritzsche et al. teaches the use of catalyst and solvents for the reaction. See example 1 and 2 where use aluminum chloride and sulfuric acid is taught respectively. Particularly note in example 2 the advantage of using sulfuric acid is taught. Note in example 3, use of tetrachloroethane is taught, which can be treated, according to instant specification, as a reaction promoter and solvent. See example 1 and 2 where use aluminum chloride and sulfuric acid is taught respectively.

Instant claims differ from Fritzsche et al. in reciting a reaction facilitator for the reaction.

However, Fritzsche et al. teaches use of sulfuric acid to accelerate the reaction as well as a condensing agent for the reaction and tetrachloroethane as solvent for the

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reaction. But as noted before these are reaction promoters and with the Lewis acid used would constitute reaction facilitator. Furthermore, Fritzsche et al. teaches use of sulfuric acid or aluminum chloride as catalyst and advantage of using little sulfuric acid in the said reaction. Hence one trained in the art would be motivated to use aluminum chloride with sulfuric acid to accelerate the reaction.

Thus one having ordinary skill in the art at the time of the invention was made would have been motivated to employ the process taught by the prior art to the starting materials and reactants including various aromatic as permitted by the definition of A and or B and expect to obtain the desired product because he would have expected the analogous starting materials and reactants react similarly. It has been held that application of an old process to an analogous material to obtain a result consistent with the teachings of the art would have been obvious to one having ordinary skill. Note In re Albertson 141 USPQ 730 especially reaffirmed on last page and In re Kuehl 177 USPQ 250.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardy et al. US 3,118,887 in view of Fritzsche et al. US 1,551,095.

Hardy et al. teach a process for making tris aryl triazines which include tris resorcinylyl triazines claimed herein. See formula I and preferred formula II on col. 1-2. Note the definition of substituents in the aryl ring include hydroxy and alkoxy (ie. resorcinol and its derivatives) claimed herein. Note Hardy et al. teach the process of making these compounds on col.2 line 64-72 and col. 3 lines 1-13. Particularly, note Hardy et al. teaches, for unsymmetrical trisaryl substituted triazines, isolation of

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intermediates particularly, bisaryl chloro triazine as claimed herein. Note process involves the use of acid catalyst. Note Hardy et al teaches acid catalyst such as aluminum chloride. See col. 5-10 for the experimental conditions. Note the explicit teaching of one or more equivalents of the aromatic compound with cyanuric chloride and then use of the intermediate for further reaction. See Examples 2, 4, 8 and 12 for experimental details which includes solvents, Lewis acid and reaction conditions. Particularly see examples 2, 8 and 12. Note in example 2 and 8 carbon tetrachloride is used which qualifies as reaction promoter and as solvent for the reaction.

Hardy differs from the instant claims by illustrating only use of aluminum chloride as acid catalyst for the reaction but not showing use of any other acid catalyst generically taught and not teaching use of these acid catalysts as reaction promoters.

Fritzsche et al. as noted above teaches use of acid catalyst- a protic acid such as sulfuric acid. In addition, Fritzsche et al. teaches acceleration of the rate of reaction with sulfuric acid and use of tetrachloroethane as solvent.

Furthermore, starting materials are analogous in that they are cyanuric chloride or 6-halo-2, 4-bisaryl triazine and aromatics including phenols such as resorcinol and - naphthol. Thus one having ordinary skill in the art at the time of the invention was made would have been motivated to combine both the primary and secondary references and employ the process taught by these prior art to the starting materials and reactants including the reaction conditions such as temperature and mole ratio etc. and expect to obtain the desired product because he would have expected the analogous starting materials and reactants react similarly. It has been held that application of an old

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process to an analogous material to obtain a result consistent with the teachings of the art would have been obvious to one having ordinary skill. Note In re Kerkhoven 205 USPQ 1069.

References cited in the Information Disclosure Statement (paper # 2) are made of record. Note paper # 3 which provides a list of references in PTO-1449 is same as paper # 2 and is not considered.

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (703) 305-1674. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is Mukund Shah whose telephone number is (703) 308-4716.

The fax phone number for the organization where this application or proceeding is assigned (703) 308-4556.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

  
Venkataraman Balasubramanian

6/16/2002